

REMARKS

Claim 1 is amended. Support for the amendments to claim 1 is found in the specification at page 7, lines 2-15 and page 8, lines 26-30.

Claim 1 as amended distinguishes over Dubin, WO 95/27021, and Schwab. Specifically, Dubin teaches an emulsification system having amide as its major component (25% to 85%) and phenol as its minor component (5% to 25%). See, col. 6 lines 7-11. In contrast, the invention claimed in claim 1 includes an emulsification system having phenol as its major (at least about 75%) component. Thus Dubin teaches away from the composition of claim 1 as presently amended.

The differences in the relative amounts of phenol and amide between the Dubin reference and the invention of claim 1 produce dramatic changes in the properties of these two different emulsification systems. The emulsification system in Dubin having amide as its major component is lipophilic. In contrast, the emulsification system in claim having phenol as its major component is hydrophilic.

As further evidence of this difference between the compositions taught by Dubin and the invention claimed in amended claim 1, Dubin states (col. 6, lines 18-29) that his emulsifiers have an HLB of 8 or less. This is characteristic of lipophilic systems. The HLB of the surfactant claimed in amended claim 1 is greater than about 12 or 13, which is characteristic of hydrophilic systems.

The external phase of the emulsions of Dubin and claim 1 is different. The claimed emulsion employs water as the continuous phase. The oil is squeezed into the water droplets making the finished fuel soluble in water as water is the external phase. Dubin on the other hand, discloses an emulsion of oil in water where oil is the continuous phase. This means that the water is squeezed into the oil droplets making the finished fuel soluble in oil.

This difference highlights the significance and necessity of different HLB balances. The end products have different solubility so the emulsification systems require different ingredients. It is generally accepted by the industry that the chemistries for oil-based emulsions substantially different from the chemistries for the water phased emulsions.

The WO 95/27021 does not make up for the deficiencies of Dubin. As characterized by the Examiner in the Final Office Action mailed on January 29, 2004, WO 95/27021, either by itself or in combination with Dubin, also fails to teach or suggest the composition of claim 1 as presently amended. As characterized by the Examiner in the Final Office Action, Schwab also fails to add anything that would teach or suggest the composition of claim 1 as presently amended.

Claim 1 was also rejected as obvious over Peter-Hoblyn et al. in view of Schwab. Again, given the amendment of claim 1, it is respectfully submitted that this rejection cannot stand. As noted, Schwab as characterized by the Examiner in the final Office Action fails to teach or suggest the composition of claim 1 as presently amended. Like Dubin, Peter-Hoblyn also teaches away from claim 1 as presently amended, since it teaches about 5% to about 25% by weight of a phenolic surfactant.

It is believed that the present application is in condition for allowance.

If the Examiner has any questions regarding this application, the Examiner may telephone the undersigned at 775-586-9500.

Respectfully submitted,  
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